THE VETERINARY RECORD

A Weekly Journal for the Profession.

No. 370. SATURDAY, AUGUST 10, 1895. Vol. VIII.

The Board of Agriculture.

In a few days the new Parliament meets and one of its duties will be to pass the Civil Service estimates. An opportunity will thus arise for bringing before the highest tribunal the mismanagement of the Department of State entrusted with the health of the live stock of the country. Swine fever, glanders, and rabies are steadily increasing, public money is being wasted, and the officials of the Board have no remedy to offer or excuse to suggest for their failure. Is it a coincidence that this failure should synchronise with the changes made in the position of the veterinary officers? It is no coincidence. It is a simple case of cause and effect which may be traced by any one, but which can best be elucidated by public enquiry.

Now is our time for action, and every veterinary surgeon should communicate with his Member of Parliament asking him to support any demand for enquiry. Now is our opportunity, and no practitioner should neglect it. A letter to your parliamentary representative is a duty to your profession, and any neglect now will throw us back a generation. According to our efforts during the next few days will be our success. Remember that for 28 years the British Government has had a Veterinary Department presided over by a veterinary surgeon. Remember that our suggestions and advice have rid the country of cattle plague, pleuro-pneumonia, and foot-and-mouth disease. The stamping out of these diseases has saved millions of money, and we have established a claim to State recognition which no independent Parliament can ignore. But—and this is the point—Parliament must be informed. Our case is a strong one but it must be made known, and attention to it can be obtained in no way so fully as by the action of local veterinary surgeons upon the M.P. for their district. Don't delay— write at once.

The N.V.A. Meeting

The recent meeting at Birmingham of the National Veterinary Association was a great success. The Local Society—the Midland Counties—came forward with its usual energy to help, and hospitably entertained the members to lunch each day. The Mayor and Corporation not only welcomed the Association but, with that broad-minded liberality which distinguishes Birmingham, generously gave the use of their Council Chamber and adjoining rooms for the purposes of the meeting and the exhibition of instruments and drugs which every year forms an attractive and instructive addition. The official recognition now so often given to the Annual Meeting of the N.V.A. by local authorities is a feature we cannot value too highly. It marks the acceptance by the public of veterinary science as of public importance, and it acknowledges our gratuitous attempts to arrive at truth and spread the light of knowledge. We are something more than a body of men following a calling as a means of livelihood. Our Association is evidence that we are willing and able to devote thought and time and money to improve our science, and to give publicity to all discoveries which may result from our researches. A man may be a good citizen by merely minding his own business, and avoiding injury or annoyance to his neighbour. A man is not a good member of our Corporate body who is content to go no further than that. A veterinary surgeon who neither contributes to veterinary science nor attempts to encourage his colleagues by association may be a good citizen, but he is an incomplete professional brother. We are numerically a small body, but we are entrusted with great interests. The health of the live-stock of this kingdom is dependent considerably upon our skill and attention. We have much to do with the prevention as well as cure of disease, and the transmissibility of some maladies from animals to man places an extra responsibility on us which we cannot fulfil except by furthering research and disseminating the knowledge attained. The National Veterinary Association has done good work for veterinary science and also for every individual possessing a veterinary diploma. No practitioner can afford to ignore it, and we look forward to a large increase in its membership. The annual subscription is small indeed and every meeting gives a good return for the money, but the members feel that there are hundreds of practitioners who might enjoy their privileges and assist the good work who have not yet availed themselves of their opportunity.

The new Honorary Secretary, Professor Macqueen is determined to try and conquer this apathy, and his energy and tact are not likely to be defeated. From him practitioners may obtain any information they desire, and he will be only too glad to afford them an introduction to the Hon. Treasurer of the Association. The next annual meeting is fixed to be held in the Eastern Counties, and this is a reason why members residing in the North and in the West should join at once, so that they may enlarge their experience by making friends at a distance from home, and binding still firmer the bonds of unity which are essential to the strength and welfare of a collective body.

CASES AND ARTICLES.

CASE OF CHOREA.

By James Tagg, M.R.C.V.S., Tirhoot, Bengal.

Subject.—A fox terrier belonging to an indigo planter in this district. When brought for my inspection he was unable to walk a few paces without falling. When at rest he had clonic spasms of the voluntary muscles, most marked of the hind quarters. I counted 70 twitches to the minute.

I diagnosed the case as hopeless, but at the earnest request of the owner, with whom the dog was a great favourite, I consented to treat him. Diet: rice and soup, with a pint of new milk daily. Treatment :—

℞	Potass. brom.	ʒvj.
	Potass. iod.	ʒiij.
	Liquor arsenic	ɱxx.
	Succus bellad.	ɱxxx.
	Aqua. chloroform ad	ʒxii.

Sig.—A dessert spoonful in a little water three times daily.

Clinical record.—June 2nd. No diminition of the spasms.

June 3rd. Still unable to walk, no improvement.

June 4th. No improvement.

June 5th. A slight improvement, walks a trifle better.

June 6th. Spasms not so frequent when at rest; walks better.

June 7th. Still improving; he walks some distance without falling.

June 8th. Marked improvement, spasms have ceased, except of the hind quarters, diminished in frequency in the latter region.

June 9th. Still improving. I left the station on this date on inspection duty, leaving orders to continue the medicine. On my return on the 13th, I found a vast improvement, the dog walking without falling every few minutes, and the clonic spasms of the muscles had ceased. He was discharged on June 21st and the owner has since written to say the dog is going as strong and well as ever he has seen him.

I should like to hear if other members of the profession have ever tried potassium iodide coupled with a bromide in cases of chorea. If there be sclerosis of the spinal cord then potassium iodide, owing to its resolvent properties, and a bromide as a special sedative, ought to be the correct line of treatment. It is rather difficult to get a sufficient number to thoroughly test this line of treatment, as chorea is not at all common in Bengal.

The Dangers from Milk.—These are not so much the graver one of epidemic disease, although this is a frequent and serious danger, as the daily risk all milk drinkers run from the large number of micro-organisms found—for the most part such as would be derived from use of dirty utensils and unclean surroundings. The organism found in greatest abundance is the bacillus coli communis—the common inhabitant of all sewage matter. The average number of micro-organisms found rises as high as 500,000 per cubic centimetre, of which 90 per cent. consist of this variety.—*B. M. J.*

WHAT WAS IT?

By J. Kerr Calderwood, M.R.C.V.S.

I was attending a young carriage mare for lymphangitis, locally manifested in the off hind leg. As she was in poor condition no aloes ball was given, but treatment with tonics and laxatives and fomentations to the leg was pursued. I saw her the second day after treatment was commenced and was pleased and surprised to note a great change for the better had taken place. Next morning she showed the following symptoms;— Standing quietly, head poked out, twitching of the muscles of the jaw, grinding the teeth, food mixed with saliva dropping from the mouth, swelling of the muscles about the face and neck, could not chew as the jaws seemed to be locked, but was able and willing to swallow liquid. The body was deathly cold, the pulse wiry, and the temperature 100. Of course the usual enquiries were made of the attendant but nothing could be elicited further than she was alright at night but in the morning he could see she had not laid down and the bedding was scraped into a heap. At first it seemed to me a clear case of choking, but as there was no cough, no distress in any way, and water passed freely down the gullet, which was not swollen, I was now inclined to think it was the premonitory symptoms of tetanus. A gentleman of great practical experience was called in consultation, but we arrived at no decision, so determined (perhaps not an altogether uncommon procedure) to treat symptoms and await results. The mare is still alive, but I will leave it to those gentlemen who no doubt have easily diagnosed this case to supply its conclusion.

CASTRATION OF HORSES STANDING.

By A. C. Stewart, M.R.C.V.S.

Read before the members of the South Wales and Monmouthshire Veterinary Medical Society, March 25th, 1895.

Sometime ago you will remember it was an instruction to the president that upon him would devolve the duty and responsibility of providing subjects for discussion during his year of office. As secretary I of course, with sublime simplicity, anticipated that I would be relieved of a portion of my work, but with what result you now see, as our easy going, genial President for the year has only fulfilled half his contract by finding an essayist for the Autumn meeting. I wrote him a few times reminding him of his obligation, and of course daily expected a note giving me the name of essayist and his subject, but there comes in the rub, and shows you what a high privilege it is to be hon. secretary of a Veterinary Medical Society. By this time, 15 days from the date of our meeting, it was unreasonable to ask any of the members to fill the gap, and as according to the rules I have to give 14 clear days notice of meeting. I decided to bring forward a subject myself. That is the reason I appear before you to-day as essayist. I trust that in future our President, whoever he may be, will see that he fulfils his obligations to the members who have conferred upon him his honourable position.

The time being short to prepare anything like an elaborate paper I trust that you will forgive any short-

comings. In introducing the subject of castration of horses standing, I thought it was one which would be of interest to all the members and one which would be certain to provoke a good discussion.

It is not by any means a theoretical paper. I propose to give a plain detailed account of how I generally proceed, and afterwards to review and criticise this particular method of operation from experience: for although it is the method by which I invariably operate, I do not for a moment wish to dogmatically assert that it has not its disadvantagas; and let me here add, sometimes these disadvantages are great and extraordinary. Many times articles have appeared in our periodicals on this method of operation, and if we were to accept as gospel all the statements that some of these hysterical advocates of this method have ventured to advance, then I should say that anyone attempting the operation for the first time would in all probability have the truth rudely brought home to him. And as bearing upon this point I cannot allow this opportunity to pass without entering my protest against the habit of a certain class of contributors to our periodicals of positively asserting as infallible the extremes of everything. These wild assertions without qualification as to possibilities and contingencies convey very often a false impression of confidence and security to many, which is only the forerunner of disappointment and regret.

There is every opportunity given the standing operator of developing his powers of phrenological observations. In fact I believe that in time he would become an expert equine phrenologist. Colts differ very much in their temperament. Some are naturally vicious and give no end of trouble, others again are very nervous and excitable and have to be taken in hand very quietly and gently, whilst others are of a lymphatic temperament and would almost seem to require to be specially roused into a spirit of resentment, if that was required. I have operated on colts of every breed and of ages ranging from one year to ten years. Colts which resent the operation most are those which have never been handled at all or but very little, and more especially if they are well bred animals of the blood, hunter, or nag type. Cart colts as a rule almost, I might say, without exception up to 3 years of age are splendid subjects for operation, whether they have ever been handled or not. Again, blood, hunter, or nag colts that have been handled, haltered, and led about are as a rule good subjects for operation. I have operated many times on yearling thoroughbreds that have been specially prepared and forced for sale, and that were really in tip-top condition and exuberant of spirits, being led at exercise for 2 hours daily, but from some defect appearing within a short time of their being despatched for sale, it was decided to keep them at home and castrate them. These colts as a rule give no trouble and require but very little restraint. In fact my experience teaches me that the more you try to fix and restrain a colt, the more will he resent and resist it. That, in my opinion, is the reason why unbroken or unhandled colts give, comparatively speaking, so much more trouble and may even sometimes baffle you. You cannot lay down a hard and fast rule as to your procedure which must of necessity vary according to the temper of your subject.

As a rule I use the Ecraseur. I have used the clams several times, but I prefer the Ecraseur as you can operate much quicker and with less risk to yourself, and in my opinion with less pain to the colt. The proper fixing and adjusting of the clam is necessarily a longer process and unless you have special clams you do not get good results. Of course you have to accommodate yourself to circumstances, but if I can I prefer to get my colt into a loose box—get him haltered, and put a twitch in his mouth. Place his off side against the wall in such a position that you can secure the best light. Make a careful examination of the scrotum. If everything is satisfactory and you decide to operate, well wash the scrotum with some warm antiseptic solution—I use Jeyes' fluid. Dry with a cloth—now put on your twitch, and this must be one of good length with four or five strands of cord, not too hard, or it cuts and breaks (hay cord is the best) give this to a man to hold with the halter with instructions to keep on gently shaking it a little to attract the colt's attention while you stand on the near side, as near the elbow as you can compatible with your ability to grasp and secure the testicles. Get hold of the off testicle first, pull well down and hold in such a position that when the testicle is removed your incision will be in the middle line—make a good bold incision from before backwards and expose testicle, do same to near testicle—when both testicles are exposed get the loop of chain of the Ecraseur, which has been during this time in the hot antiseptic solution, and put your left hand through it and allow it to swing on your wrist, grasp the two testicles with left hand, pull down, and with right hand adjust your chain well up on cords, then tighten your Ecraseur quick and commence screwing—screw up rather sharp till you feel the cord fairly compressed, then desist for a few seconds and when you feel chain cutting cord screw on sharp till both testicles fall on ground. The time when the colt will trouble you most is when the chain is tightly compressing the cord but before it has begun to cut. This should be only for about half-a-minute, and then when the chain is cutting the pain is gone. Now throw some of your Jeyes' fluid solution about the wounds and then freely smear with carbolized oil 1-20, at the same time pushing the cords up in the scrotum if they have not retracted. Take twitch off and hold colt for a few minutes till the hæmorrhage ceases, then let him go, and in nearly every case he will commence feeding and looking around himself as if nothing had happened. The time occupied in all this is generally under ten minutes, depending of course on your subject.

Now by way of advice to anyone starting out to the country to castrate colts by this method. Never go unprepared for contingencies; always carry in your trap a spare ecraseur chain, your side line, a spare set of clams, needles, and suture cord, some carbolized tow, and tinct. Ferri perchlor. You may go ninety-nine times and never require them, but in the hundredth case you may require them, in fact you don't know when you may need them, and very often when you are in need of anything is the time you can't get it. Sometimes, your chain will break, and as once happened to us both the original and the spare chain broke, and we had to ligature the cords with whip cord as we had no clams. Sometimes the hæmorrhage is excessive almost inducing collapse and you have to cast the animal and plug scrotum with carbolized tow and stitch up the wounds.

I daresay some of you, if not all, will have noticed an article upon castration appearing in *The Veterinarian* of last month, by Mr. R. Spooner Hart, of Calcutta, wherein he states that he had the pleasure of listening to a discussion upon castration by the standing operation in which the lecturer said "that in operating he stood *behind* the animal." Mr. Hart said "that to him it seemed like a fairy tale; and he wanted to know if any insurance company would accept the proposal of the standing emasculator?" Well, to my mind the man who in all seriousness made such a statement is nothing more nor less than an unmitigated fool, and is one of those men whom I included in my remarks of censure for going to extremes. Certainly he cannot be speaking from experience, but rather I presume he is overcome by his own vanity, and attempts to assume an air of superiority to his brother practitioners The ravings of such men as these neither tend to advance their own abilities nor to elevate the profession, but on the other hand, hold them up to ridicule.

Now as to the operation by clam, which some prefer, and by which method I have operated a few times. There are several designs of clams all having the same object in view, but to my mind the majority are imperfect. My knowledge and experience of the use of the clam was derived from a great friend of mine, a most practical veterinarian, and a man of very large experience in that special branch of surgery, and I cannot do better than give you his own words, as in my operations I acted up to them and with success.

He said—"I have cut all my colts for some years with the clams and string. The leather ring will not do, as it springs a little, no matter matter how tight you put it on, and the very slightest spring after the clam is on is enough to ruin the operation. So true is this that tying the clam with tar string, which stretches, has often fatal results, for this reason; the cord swells, pressure on vessel is removed when the string stretches, and I have seen colts with such a clam on for four days and hæmorrhage takes place when the clam was removed. The string must be tight enough not only to press the cord but to *bruise and destroy the blood vessel*, and I look upon the thorough tightening of the clam as very important. I also use a one to eight corrosive ointment. I always use cord same quality as whip cord but the thickness of hamstring for tying the clams, which commences to contract whenever it gets wet and further tightens the clams. This year, however, I have had clams made with a screw at one end instead of the string and I find they are simply perfect. Besides having a screw they have a feather on one edge and a groove on the other, which effectually destroys the cord. I have only had four pairs made and I am using them all, but if you wait till I have them made I will send you a pair. If you are not above taking a wrinkle the secret of success in this operation is in making the wound in the scrotum a very large one, as I have lost more than one colt through the clam dropping down slightly from the abdomen, the cord swelling, the tissues of the scrotum swelling, pressing on the cord; blood got down between the clam and abdomen but could not get back, the constriction at the scrotum preventing it. A swelling about the size of an egg took place, this became gangrenous, inflammation of the cord followed, and death in about 11 days. These cases always take place when the testicle is very small, for were it larger the wound required to allow its escape would prevent such an accident.

One word about their use. Steep them for an hour before using in corrosive sublimate solution 1-1000. Dry them then, and anoint the groove and feather with corrosive sublimate ointment 1-20. This ointment has a double function. It helps to cause the death of all the tissues within clams, which is very important, and also prevents the clam adhering to the cord which causes some difficulty when the clams are being removed. When the clams are on see that you remove *all* that is below them; this is best done with a pair of bent dressing scissors. I find if there is any portion of the cord left on below the clam and any trace of vitality left in the part in the clam it leads to the absorption of gangrenous matter, poison of the cord, and death from septic poison. I can manage nicely to put on the clams and I screw them up without any help, and this prevents any traction on the cord when putting them on. Screw up the clams as firmly as you can and leave them on for six hours only. clean your nails, and wash your hands in the solution already mentioned. And you will never have *any* swelling, any fever or any deaths. That is my experience since using them."

Now to criticise and review. First of all what are the advantages of this method over that of the others where you require to cast.

(1). There is less pain to your subject, and when I say that I mean that to my mind the extreme fear induced in a colt by fixing and casting with ropes and restraining him with them causes greater mental agony and pain than in the majority of cases does the entire operation by the standing method.

(2). Takes less time to operate.

(3). There is less risk to your subject.

(4). You require less help, and therefore you can set out on a castrating journey any time that suits your own convenience without previously making an appointment For with a good man whom you can depend upon to tackle and stick to a colt, to take his head, and yourself to operate, in the majority of cases you require no further assistance.

Now what are the disadvantages? Well the standing operator requires to be a considerably active man, of strong nerve, courage and resource, and that being so this operation can only commend itself to a certain class.

Again you cannot operate by the standing method under chloroform which to some is all important. And last, but not least, there is the possibility and risk of making an exhibition of yourself with a refractory colt, and causing the infliction of a great deal of unnecessary pain during the operation. This has happened on more than one occasion with myself, and it has almost led me to give up the standing operation by the ecraseur.

Mr. R. Spooner Hart, in his article which I have already quoted, puts the facts in a nutshell when he says "Owing to the kindness of a practitioner I am acquainted with the facts relative to a standing operation which took place quite recently. The poor unfortunate subject lay down 3 or 4 times during the operation, and on getting up the exposed testicle and the scrotum were covered with the bleeding and dirt. There was great delay before the testicles were finally removed, and the animal was subjected to prolonged pain and suffering. Heavy bleeding also ensued. Is this surgery and the regard we have for the rights of animals? What possible condition could be more *infra dig.* to a surgeon and unprofessional like than to see a horse standing with testicles exposed, bleeding, and refusing to permit further interference? The sooner such proceedings are abandoned in this and similar operations and the curtain allowed to fall upon acts of wanton cruelty the better. It will enhance our reputation as professional men and humanitarians."

Well, gentlemen, this no doubt is an exceptional case, and will not happen in more than 5 per cent. of cases, and that in cases where the operation is by ecraseur. But shall you condemn the standing operation because of the 5 per cent. failures? I think not. Yet I cannot but admit that in it there is nothing either surgical or scientific. The only thing is it is practical and expedient and your clients like it. Certainly if we were to look at the operation from a scientific point of view we would cast, secure, administer chloroform and operate by clam as exhibited. But consider the business side of the question, if I may be allowed to introduce it. Could you do this for the fee that you are generally allowed? Of course all sorts of abusive adjectives may be hurled at my head for daring to degrade the profession by for a moment introducing such sordid motives into this discussion. Still we must all live, and that somehow, and as in these days of severe competition "time is money" we who follow the standing operation in disregard of science must perforce be excused.

Sheep attacked by Rabies.

The London Gazette notifies that during the week ended the 27th ult., cases of rabies were reported from the following counties:—Lancaster, 1; Lincoln, parts of Lindsey, 8; London, 1; Middlesex, 1; York, West Riding, 4;—total, 16. The animals attacked by the disease in Lincolnshire were sheep in every case. Three of them died, the others being killed.—*North British Agriculturist.*

VETERINARY SOCIETIES.

BORDER COUNTIES VETERINARY MEDICAL SOCIETY.

A general meeting was held at the Bush Hotel, Carlisle, on Friday, 19th July. Mr. J. C. Soulsby, president, occupied the chair, and there were also present: Prof. Bradley, of the New Veterinary College, Edinburgh; Messrs. H. Thompson, Aspatria; Donald, Wigton; Pears and Park, Penrith; and J. W. Hewson, hon. sec.

Some discussion took place as to the issue of a circular by the Secretary for a special meeting of the Society to take steps to forward the candidature of Mr. McIntosh, of Dumfries, for election to the Council.—Mr. Donald complained that no time was specified on the circular, and when he attended at the usual hour he could not find that there was any meeting.—The Secretary said as a matter of fact no meeting was held. The meeting was arranged at the request of several members. He afterwards heard that Mr. McIntosh did not wish to become a candidate—Mr. Donald: He staunchly refused.

Mr. BELL (Carlisle) wrote that the ecraseur belonging to the Society required repairing, and the tooth instrument case was broken in transit from Carlisle to Mr. Soulsby, of Whitehaven. There was a rule that damage to instruments should be repaired at the expense of the person borrowing them.—The President said the tooth instrument case was broken before it went to his father. —Mr. Donald said Mr. Soulsby, of Whitehaven, was not a member of the Society, and was not entitled to use the instruments.—As a result of discussion, it was agreed that the instruments be procured for the next meeting, and if the broken case was not strong enough for its purpose, as was alleged, the Society should provide a better one.

The SECRETARY nominated for membership of the Society Mr. Hewitson, Brampton, and Mr. Martin, Appleby.

PATHOGENIC BACTERIA—DISCUSSION.

Discussion was now resumed on the interesting demonstration of Pathogenic Bacteria given by Professor Bradley at last meeting.

Mr. THOMPSON said he did not altogether go in with the germ theory, but he supposed he would have to, to a certain extent. Some people said he did not read his Bible, but he said he did. (Laughter.) In the 13th chapter of St. Matthew, and part of the 3rd verse and five following verses, there was something said about a sower going forth to sow, and some of the seed fell by the wayside and the birds picked it up; some fell amongst thorns and was choked, some fell among stones and was scorched by the sun, and some fell upon good ground and brought forth some a hundred and some sixty fold. He asked them not to run away with the idea that he had selected a text and was going to preach a sermon, but he thought this very applicable as showing that seed required a good bed in the ground before it would bring forth its increase. There were four points in that text. In three different places where the seed fell the ground proved unsuitable, but on the good ground it grew; and that he thought was applicable to the case of the microbe and the bacillus—it must have suitable ground. He did not doubt the accuracy of the experts who with the aid of the microscope had found out the different bacilli or microbes or germs which caused different specific diseases. Their experiments were carried out on suitable ground and surroundings. Experts told them that the spores of specific bacilli or microbes could lie in a dry condition for a considerable time, like "wheat or some other grain" and retain their vitality, waiting until they found a suitable situation for their development. If these spores were continally in our midst, in the water we drink, the air we breathe, and the food we take, and if they were so infectious, it was remarkable that the whole human family and all the beasts of the earth were not destroyed by these little microbes. It appeared to be due to the simple reason that in three-fourths of the cases they did not find suitable ground. With reference to the vitality of these spores, there had been a very good illustration in Cumberland this year. Many farmers had sown their turnips where the ground was in good tilth, but there was no germination because moisture was wanted. Iestead of the seed springing in the course of six or eight days, it had not germinated in six or eight weeks, and the seed was wasted. The first slide Professor Bradley showed them was the microbes of pus found in an external wound. That was possibly quite correct, but what about the pus that had not an external opening, such as an encysted abscess in the external parts of the body? It would be another sort of microbe, he supposed. With reference to tetanus, said to be caused by the drumstick bacilli, he had read in Sims Woodhead's bacteriology that this bacillus was found in soil, and particularly in garden mould. That was rather astonishing, because it was a common practice with him to dust with dry soil a good healthy wound—it was a very good absorbent, and the wound rapidly healed. He could not remember having a case of tetanus supervening on the application of dust to a wound that was healing up nicely. It was also recorded in cases of tetanus that the bacilli were not found in the secretions or in the blood, but in the wound or the neighbourhood of it. He remembered a case of tetanus in which the victim was a big black horse belonging to the late Mr. Blackstock, of Hayton Castle. In pulling a heavy load it stepped on a nail, which went through the sole and split the coffin bone. This was about 5.30 or six o'clock at night, and the horse died of acute lockjaw before midnight, in the greatest agony. It was a smart bacillus that caused that tetanus. (Laughter). With reference to tuberculosis, glanders, actinomycosis, and other specific diseases, he thought there were sufficient diagnostic symptoms without calling in the aid of the microscope, but in anthrax there was much difference of opinion. The anthrax bacillus was among the first that was found, but he was a bit sceptical as to whether the rod was the cause of the disease or an effect of the disease. Experts told them that the anthrax bacillus was a great lover of oxygen. In the case of a beast at the point of death from anthrax the bacilli were not to be discovered if the blood was examined. What then was the disease prior to the invasion of the bacilli? If the bacilli loved oxygen, then in the case of an animal breathing 70 or 80 times a minute with its lungs in a congested state, the blood could not be properly oxydised, then where was the bacillus to get the oxygen from? They were told that spores would not develope in the body. They must be outside the body, and they also loved oxygen, and what was more they must have a temperature of not less than 64° and up to 108° and 110°. In winter time he would like to know when there was a temperature of 64, with frost and snow on the ground? In summer time sunlight was said to have a depressing effect on them and assisted in destroying them. He did not see why they should be so infectious or contagious. He did believe in anthrax blood being very inoculative, from what he had seen himself, but he could not believe it was so infectious or contagious as people made believe, as he knew of many solitary cases having occurred. In these cases he would like to know why one professional man should take it upon himself to say it was anthrax when there was so much difference of opinion amongst experts. Professor McFadyean said in his Journal that many cases sent up to him were not

anthrax at all. Sunlight destroyed them, yet it took 64 degrees of heat to germinate the spores, and he (Mr. Thompson) could not see how it arose. If they were in a dry form and floating about certainly pecularities of the soil, food, or water, or temperature might act on the beast, and bring it into that condition where the spores must develope and grow; but that was the only way that he could see. It came to the old text again that the ground must be suitable; and they must inquire what it was that put the body into that condition which gave these specific organisms power to assert themselves. The late Professor Dick used to say "Find out the cause—remove the cause and the effects will cease." That was a grand old story. If these spores of typhoid fever, scarlet fever, measles, small-pox, tuberculosis, glanders, anthrax, etc. were all floating about continually in our midst it was funny that these organisms should select various constitutions to develope their different species. If these bacilli were the cause of disease, why did not the experts find some material to destroy them, and not let them take effect? He thought they were not the cause, they were more the effect of some altered conditions of the body.

Mr. PEARS was of opinion that there was a great deal to be discovered yet. One thing he was "capped" with, namely, when the blood of an animal was sent for examination an hour or two after death from anthrax, experts were unable to say the cause of death, and said the specimens had been sent too late. It was very unsatisfactory, because in cases which he knew to be anthrax the Professors had been unable to tell him anything about it.

The PRESIDENT said that when Professor Bradley informed him that tetanus was due to a microbe generally found in soils he could hardly understand it, because a number of wounds were kept dirty and they would often find that horses out at grass had wounds on them, and they must be expected to suffer from tetanus if that was the case. He had come to the conclusion that tetanus was due to the surrounding atmosphere, and the stable perhaps had something to do with it. They might go two or three years without having a case, and then there might be half-a-dozen within a month. To his mind the climate had something to do with it. Perhaps it was that the animal got into a certain habit of body and the microbes were able to lodge there and develope. Anthrax was a very vexed question, for one man would say a certain case was anthrax, and another would say it was not. How were they to get to the bottom of it? With all their microscopes and testing and such like, experts were not able to say with certainty that a disease was due to a certain germ. Science had not advanced so far.

Mr. DONALD said tetanus, anthrax and tubercle seemed to interest them as practitioners the most. Like Mr. Thompson, he was doubtful about tetanus being due to the particular bacillus which scientists told us it was due to. It was common from wounds especially, but he had never seen more tetanus in the case of animals and consequently liable to contamination by soil in the fields than in the case of those treated antiseptically under the veterinary surgeon. It was a practical fact known to every practitioner that punctured wounds and wounds resulting from ligature were decidedly the most liable to be followed by tetanus, and viewed in the light of present day pathology he failed to see why it should be so. Another point on which information was wanted—when he was at College it was taught that granulating wounds were proof against the infection of micro-organism or septic infection, but as every practitioner knew tetanus supervened when the healing process was far advanced and progressing satisfactorily. How was this? It is just contrary to what one might expect. In the treatment of tetanus, after the bacilli was developed in a wound and about the tissues, it ought to be a simple matter to treat that wound, either with agents that would destroy the bacilli or neutralise their secretion, whichever might produced the symptoms. Take the case of docking. One would naturally expect that an animal suffering from tetanus as a result of docking, if it were redocked and the wound dressed, it would go a long way towards the recovery of the animal. Even supposing that a portion of the poison had been absorbed into the system, if the source of supply was cut off, the vital forces ought to be sufficient to rid the system of the poison in it if it was developed in the wound locally, but as a matter of fact we are no more successful in treating tetanus now than 50 years ago. Scientific men were widely at variance on the question of anthrax. One man would say that a sample of blood was teeming with anthrax bacilli, and another scientist would say there was no evidence of anthrax bacilli – that the bacilli present were the bacilli of decomposition. In the Silloth cases, a number of scientific men swore that the bacilli were anthrax, and others that they were not. He could point to other opinions upon different cases in which microscopists were quite as much at variance as the practical men, indeed he thought if you want two men to disagree upon the same facts get two bacteriologists. Bacteriology seemed to him to be too largely made up of theories. Mr. Thompson instanced an isolated case of anthrax. In the Wigton district this spring, four cattle pastured in a field part of last summer and all winter, and one was struck with anthrax. It presented all the post-mortem appearances of anthrax. There had not been another case amongst them, and there was no reasonable possibility of any contagion or contamination. About two years ago he had what he considered a case of anthrax in a certain stock in the neighbourhood of Wigton. The animal presented all the post-mortem appearances of anthrax, and he forwarded a portion of the spleen to Edinburgh, but they could find no anthrax bacilli. The case was not reported, and he concluded that it was not anthrax, notwithstanding that there were post-mortem symptoms of anthrax. But they lost another three cases in three months, and these were not reported at all. They were buried on the farm, contrary to the general rule, not in quicklime, but in the ordinary soil, and he allowed them to lie until decomposition had set in before they were buried. He believed a great deal of mischief was done by disinfecting the carcases and manure of anthrax animals. The best disinfectant they had for anthrax was decomposition. What interested the practitioner most was the amount of curative knowledge which could be gathered from bacteriology or any science. As far as he could see notwithstanding all the work and time and energy bestowed upon bacteriology it had not assisted curative medicine to any marked degree, and he did not think it had done very much in the line of preventive medicine. It might be presumptuous for general practitioners to express opinions, but he thought bacteriologists had a great deal to tell them before they arrived at the truth. Could Professor Bradley tell them any other disease which gave them these typical post-mortem symptoms of anthrax which was not pure anthrax. Both before the passing of the Anthrax Act and since they had frequently come across isolated cases showing all the typical symptoms of anthrax. But they heard no more about it, and if they sent the blood or specimens for examination they were told it was not anthrax, and in some cases in which they never suspected anthrax they got word back that it was anthrax. (Laughter.)

Mr. THOMPSON referred to the Silloth cases which were certified to be anthrax, but in which no fewer than four professional men distinctly said they could find no trace of anthrax. From one of the cases portions of the body were sent to the Royal Veterinary College, London, and the New Veterinary College, and the Clyde Street

College, Edinboro', and at none of them could they find anthrax bacilli. Yet from the same body Mr. John Bell, and Mr. Hall of this city, and Prof. McCall, Glasgow, said they had found the anthrax bacilli. It was rather strange that they found them and yet none of the men who assisted in the post-mortems with cuts on their hands felt any bad effect. What was more, from the self-same body a rabbit was inoculated and took no harm; the poultry picked up the blood and pieces of flesh and so did the dogs and they took no harm. From what he had seen and read of it, and from what he had heard from Mr. Wright and Mr. Little it was not anthrax at all; it was a poisonous material which the horses had got in their food.

Mr. DONALD mentioned the use of tuberculin, observing that every one at last meeting spoke in praise of it. Some cases which he had tested he had condemned as tuberculous; and he had had the opportunity of testing two by post-mortem examination. A well-bred heifer which was thought to be tuberculous he subjected to the test, injecting tuberculin according to the instructions. The temperature rose to 106. A post mortem examination showed a number of abscesses and chronic pneumonia. He forwarded portions of the lung to Professor McFadyean asking if it was tubercle or not, and he replied that it was chronic catarrhal pneumonia. The next was the case of a cow which some months before was put up to fatten under his advice that she was tuberculous. After injection her temperature remained at 102. She was killed some six or eight weeks after and her lungs were most distinctly tuberculous. Not satisfied with his own opinion he forwarded the greater portion to Professor McFadyean, who replied that there was no doubt the animal was tuberculous. These were facts they could not shut their eyes to, and he believed from what he had seen of tuberculin that it was not so good a diagnostic agent as some scientists made out. In all experiments he had made with tuberculin he had never seen the animals suffer constitutionally at all, it had never done them any harm.

Professor BRADLEY, in reply, said Mr. Thompson's text was remarkably good in a way. Not only was good ground the proper pabulum necessary for the larger seeds such as oats, but it was absolutely necessary for microscopic seeds usually known as spores. Mr. Thompson touched upon natural immunity and wanted to know how it was that these spores floated about in such numbers and ultimately gaining access to the animal body produced disease. We, as animals, were inhaling these spores etc. by the thousand per day, and yet we continued healthy. The theory of phagocytosis had been put forward to explain this natural immunity, and it seemed at the time to be a very satisfactory explanation. It was supposed that these phagocytes, which were modified or specialised leucocytes, had the power of surrounding and devouring these germs. Some bacilli were said to have a positive chematactic influence over phagocytes; they secreted a subtle something which was a sort of bait to the phagocytes. Others had a negative chematactic influence, secreting something which had a contrary effect and drove away the phagocyte, and in these cases disease appeared, whereas it did not result in the former case. That was only one theory. There were a number of others, but it would be useless to go over them. With reference to suppuration, Mr. Thompson seemed in doubt as to the causal agent of pus in an enclosed abscess. The best example of pus in an enclosed abscess was a case of strangles. In a strangles abscess it was possible to find streptococci, resembling the streptococci in ordinary pus. In these cases of enclosed abscess the strepto or staphylococcus must have been carried by the blood. How they entered the blood was of little moment. Germs could easily gain access to the blood. He saw it stated that it was almost impossible to get blood from a living animal or living person without getting some germs. The most healthy of us probably had circulating in our bodies numbers of different germs. Those who were against the germal theory would say "Why did they reside there and cause no inconvenience?" It was just possible they really only existed there and did not live for any lengthened period, and in a lot of cases were perhaps just corpses floating about. Tetanus was an interesting and difficult subject to tackle. It was only recently that a satisfactory explanation could be given of the cause of tetanus, and to some people it did not seem satisfactory even yet. One great fact which pointed to the existence of the germ in soil was seen in military campaigns. Before the discovery by Nicolaier of this particular bacillus, tetanus was after a battle a common disease in the Army. It was pointed out how the danger could be obviated by placing the wounded men in beds as soon as possible in order that the wounds might not get polluted by the soil. Since then the percentage of deaths from tetanus had considerably decreased. Mr. Thompson's statement about dusting wounds with soil was to him a startling one, and he would have taken it as counter to all the laws of antiseptic surgery, but Mr. Thompson was careful enough to add that the wound must be a good one, *i.e.* in a healthy condition. It was quite possible that if the soil was applied to a wound in a bad condition tetanus would result. With regard to the use of the microscope, he said in the majority of cases of tuberculosis the ordinary diagnostic tests by the ear, eye, &c., were sufficient to make one sure that it was a case of tuberculosis. But if there was a mild case of tuberculosis of the udder then a microscope certainly had its use, that is to say it was possible to demonstrate bacillus in the milk. It was by means of the microscope that we learnt the life history of the causal agents of disease, and it was only by knowing their life history that one could satisfactorily combat the ravages of disease. On the subject of anthrax he had an inward quaking. Mr. Thompson propounded a conundrum. whether the disease was produced by the bacillus or whether the bacillus was produced by disease. There were four postulates laid down by Koch, and unless they were all admitted one was never at liberty to say that a particular germ caused a particular disease. First the germ must be found in the animal, in the blood or in the secretions; secondly, there must be cultivation of those germs, in some artificial medium outside the animal body to several generations, then with the pure cultivation the disease must be produced again in a healthy animal, and finally in the blood or tissue juices of the animal inoculated the bacillus must again be demonstrated. Would it not be rather strange to find that this could be done if the bacillus was the effect of the disease? Did not all this rather point conclusively that the bacillus was the cause of the disease and not produced by the disease? If the bacillus was produced by the disease how was it they could take it out, cultivate it, inoculate it into another animal, and get precisely the same disease? He pointed out that it was not absolutely necessary for their growth that the germs of anthrax should have oxygen, as it was shown that the germ could grow out of oxygen altogether. To produce spores free oxygen is demanded. It was only when the blood was shed that the spores could be produced. The spores were capable of withstanding extremes of temperature—freezing, for instance, though frost would very soon destroy the bacillus. Sunlight had the power of preventing growth, but the spore remained very hardy, even being able to resist boiling for a few seconds. An important point was this. It was almost out of the question to find a bacillus in blood that had been obtained from an animal some considerable time previously. It was almost impossible to find bacilli in the spleen a few hours after death, the reason being that the bacillus of anthrax could not live where putre-

faction was taking place. If specimens were sent to any laboratory for microscopic examination it should be portions of the extremity—the foot or one of the ears, for instance, because at these points putrefaction was last to reach. The President referred to the case of horses at grass rarely being affected with tetanus. That might be accounted for by the sanitary surroundings. Mr. Donald asked one or two questions. A punctured wound was one of the most difficult wounds to treat, and it always set up the greatest amount of irritative fever, and was one of the most slow of healing. A ligature, unless it was absolutely antiseptic, was liable to set up irritation. These were the only two reasons which he could give to account for tetanus in such cases. Granulated wounds were almost proof against infection, but though the phagocytes which were present might be sufficient to prevent the entrance of any germ, we must remember that the tetanus bacillus only lived on the surface of the wound, and the phagocytes might have practically no effect upon them. Mr. Donald made a sweeping assertion when he said bacteriology had done little for curative medicine. Bacteriology was first applied to human medicine, to which we must look for the greatest advances. He could endorse to some extent the statement that tuberculin was not such a good diagnostic agent as was at one time supposed. It was not so good as mallein, which was probably at the summit as one of the new diagnostic agents. Tuberculin was remarkably useful, but there were cases on record where it had not been successful. He was still open to hear the same charge brought against mallein.

Mr. THOMPSON said a number of cases of tetanus he had come across had been from wounds in the feet. But he had attended pit bottoms for 35 years, and though he had seen any number of cases of probed wounds in the feet, he had never seen a case of tetanus except on one occasion.

The PRESIDENT said he could endorse Mr. Thompson's remarks with regard to the pit ponies. For the past twelve years he had never come across a case of tetanus amongst them.

Professor BRADLEY said pits were tolerably free from bacteria as a rule.

On the motion of Mr. Donald, and seconded by Mr. Pears, a hearty vote of thanks was passed to Professor Bradley.

Mr. DONALD proposed that Mr. Park's paper on "A Case of Schirrous Cord in a Colt" be taken as read and printed. This was seconded by Mr. Thompson and carried.

Mr. SOULSBY, the president, then offered to read a paper at the next meeting on the diseases of the digestive system of the ox.

A vote of thanks was proposed to the Chairman, which was seconded by Mr. Hewson and carried.

EXTRACTS AND NOTES.

THE ROYAL COMMISSION ON HORSE BREEDING.

Much interesting information has been provided for horse-breeders in the fifth report of the Royal Commission appointed seven years ago to administer the fund made available by the abolition of Queen's Plates. The most salient features in the report are the passages in which the Royal Commissioners express themselves as satisfied with the number of entries, despite the reduction in the value of the premiums necessitated by the ungracious withdrawal of the Royal Agricultural Society from its share in the work, and also with the percentage of foals left by the stallions in the different districts where they have been located for service. In confirmation of this they give first the entries for the past seven years, these having been 90 in 1889, 98 in 1890, 105 in 1891, 117 in 1892, 105 in 1893, 97 in 1894, and 124 in 1895, and then tables which show which sires did best in the last two seasons (1892 and 1893) for which the returns are complete. The average for both seasons was about 60 per cent., but some stallions did much better than others, for in 1892 Rameses, Brayton, Lord Molynoo, Blue Grass, and Rosy Monk are credited with percentages of over 70, whereas Sir Harry, Blue Boy, and Truefit have less than 40 per cent. There was an equally wide difference in 1892, when Button Park, Rameses, King Ebor, Crom-a-Boo, Eglamore, Bahadur, and Sam Kheen have percentages ranging from 83 to 71, while Potentate and Belville have only 37 and 35.

The tables which deal with the services of Queen's premium sires in 1893 and 1894 are not so satisfactory, for they show that, while in the former year these horses were mated with 1555 half-bred mares at the Commission fee, the total had dropped to 1300 last year; but, as the present season is not yet over, it is not as yet possible to say whether the ground lost has been recovered or not In view of the fact—to which the report very justifiably adverts—that so many of the prize winners at the principal horse shows are the progeny of sires which have won Queen's premiums it is to be hoped that their services will be appreciated, and the Commissioners may well regret that the limited amount of money at their disposal does not admit of their giving more premiums in the many districts where at present the demand far exceeds the supply. Another paragraph in the report deals with the important question of veterinary examination at the annual show, and the Commissioners state that the new regulations upon this point have "resulted in greater consistency in the decisions, and that there is a steady decrease in the number of horses declared unsound by the veterinary experts." In support of this statement the following table is appended to the report, giving the number of stallions sent out by the judges for veterinary examination and the number passed as sound:—

	1889	1890	1891	1892	1893	1894	1895
Stallions sent for veterinary examination	52	60	52	58	55	47	56
Stallions passed as sound.	35	43	38	33	44	42	46

The diseases which, in accordance with the rule passed a few years ago, are held to be hereditary, and consequently to entail disqualification, are roaring, whistling, unsound feet, ringbone, navicular disease, spavin, and cataract, and out of the 82 horses disqualified in the last six years no fewer than 32 have been rejected on account of spavin, 25 for roaring and whistling, and 13 for cataract.—*The Times.*

THE ART OF MILKING.

At the recent Dairy Conference Mr. F. J. Lloyd read a paper which had been prepared by Mr. Primrose McConnell, of Ongar, Essex, on "The Art of Milking and its Influence on the Cow and her Milk Yield." The two main points to be attended to in milking were gentleness and quickness; indeed, of the two, quickness was the chief, for a quick milker could seldom be a bad one. Where milking was done by piecework, and the tough cows were eliminated, it was customary for one person to

do ten in an hour, a little longer time being required when all came together in full yield in the beginning of summer. Where it was not done by piecework, and the cows were of all sorts, it might take half an hour longer; but the more quickly it was done the more quickly would the milk yielding power of the animals be stimulated. If the milk was frothed in the pail, it might be taken for granted that the speed was all right; but if it was not frothed then the milker was doing an injury to the cows, and if kept to the one lot would put them prematurely dry. But the quality of the milk as well as the quantity was influenced by the manner of milking the cows. Dr. Babcock found, in some experiments he tried regarding this matter, that slow milking had a very decided effect in reducing the butter-fat in the milk, there being an average decline of over 11 per cent. in his trials as a result of slow milking, while there was also a decided diminution in the quantity; though in a prolonged trial with cows naturally going dry the differences tended to disappear. The total result over a season, however, was beneficial to the milk yield in the case of quick milking, not to speak of the saving of time. We now knew that it was wholly through the result of nervous action that the blood, lymph, and cells of the tissue of the udder became "metabolised" into milk; and they further knew that this formation of the milk largely took place after the operation of milking had begun. This was why the gentle treatment of the animal had so much to do with her milk yield; if she was hunted with dogs to begin with, and afterwards roughly treated in the milking, the nervous excitement reacted on the tissues of the udder and prevented the secretion of the milk, and, in common language, she did not "let it down." Anything that excites her or ruffles her temper had the same effect, and she had not of herself the power to either let it down or hold it up, and the milk would only flow readily when she was treated in such a way as to make her pleased and contented. While kindness and gentleness could do much in making a cow a quiet and good milker—especially when first in milk as a heifer—there were always some which would kick and upset a pail when being milked. For such the strap or belt must be used on the hind legs, though often it could be dispensed with after a time. Holding by the nose was a good plan, but it required an extra person to do so; while often if one merely stood at the shoulder and patted the cow it was enough. Milking should be done quickly, quietly, and thoroughly. There should be no milk left in the udder, as doing so tended to dry up the animal, and for this reason some responsible person should go round after the others and squeeze out the last drops. These "strippings" were the richest part of the yield, while this plan ensured the animals being milked dry, and thus having their yielding power developed. Cows should be milked indoors. In the hot weather they ought to be put indoors during the afternoon, and either get some green forage or sloppy artificial food. This relieved them from the torment of the flies, as there was nothing that reduced their yield more quickly than galloping about in fly time with their tails up like cats. Washing over with sheep dip or carbolic acid helped the cows in this respect, and enabled them to stand more quietly during milking, with less of the tail whisking practice; for a lash across the face with a cow's tail was apt to ruffle the attendant's temper, and react disastrously on the milk yield. Cows should be milked twelve hours apart, but an hour or so backwards or forwards in the time was really of very little consequence, so long as it was kept to regularly. Regularity was the main point in this connection, for the cows were very much creatures of habit, and look to have certain things done at certain times, and irregularity fidgets them, with a consequent fall-off in yield. For tough milkers the small ivory cones for distending the orifice of the teat were valuable. The difficulty of getting good milkers was one of long standing, and at least half a century ago attempts were first made to invent some sort of mechanical milker to take the place of dear or inefficient labour. It was only within the last few years, however, that mechanical milking had become a possibility, but it might now be pronounced a complete success, doing better work than the great majority of hand milkers. There was never much difficulty in extracting the bulk of the milk from a cow's udder by the ordinary sucking action of a pump, but the difficulty was to take out the last drop, and also to improve the flow by giving the mental stimulus to the cow that we obtain in hand-milking by handling the teats. The introduction of the "pulsating" action has accomplished this, and there are now two machines in the market ready for fitting up—the "Murchland" and the "Thistle"—either of which is warranted to work satisfactorily, and were being made as rapidly as possible by their respective proprietors.—*Live Stock Journal.*

THE STAR VETERINARY SWINDLE.

In reference to the paragraph in last week's *Truth* about the Star Veterinary Company, I have received from the office of the "Company" a letter which I can only call an empty impertinence. My last week's paragraph mentioned an instance in which the Star Company's cattle drinks had been sent out, in the usual way, without an order, and incidentally stated that on the goods being returned by the consignee the Star Company refused to accept them. What the so called "Company" now write to tell me is that they did not refuse the goods, but merely objected to pay for their conveyance by passenger train, instead of at the usual goods rate. On the strength of this stupid quibble they have the impudence to say that my remarks concerning this particular case are "entirely devoid of truth." What they mean by troubling me with such nonsense I do not know. For many months past I have been warning the public against the parties running this business as the perpetrators of an impudent swindle. I have had a dozen cases before me in which they have sent to landlords and farmers in the country their cases of medicine, and after waiting long enough for the stuff to be either lost or made away with, have attempted to extort payment for it by threats of legal proceedings, and occasionally by the issue of County Court process. In no one instance have these threats been carried out, and the whole game is evidently no better than an organised system of extorting money by a trick. This has been said in *Truth* again and again. That it cannot be answered is sufficiently proved by the fact that when the "Star Company" people at last think it worth their while to write and question something I have said, they have nothing better to say for themselves than the rubbish I have described above.

I have just received still more significant evidence of the fraudulent practices of this so called "Company," which, as far as I can make out, consists of one intelligent Hebrew. I mentioned in last week's *Truth* that on their stationery appears the name of Mr. Charles Gray, M.R.C.V.S.L., as "principal consulting veterinary surgeon." I now hear from Mr Gray himself that his connection with the Star Company was limited to a six months' agreement with them, which terminated about two years ago, and that when the engagement terminated all right to use his name ceased; in fact, there was an express agreement that his name was not to be used in future. Not only are the Star Company now using Mr. Gray's name in the way I described, but they have taken a far worse liberty with it. A weekly contemporary having commented the other day upon the doings of the Company, a letter was written to the editor, bearing the

signature, "C. Gray, Star Veterinary Medicine Company." The writer described himself as principal consulting veterinary surgeon to the Company, and among other things expressed his high opinion of the Company's medicine. The signature to his letter was impressed with a stamp, showing that it is in common use. Yet the signature thus used is the signature of a gentleman whose connection with the concern terminated two years ago, and who has expressly forbidden them the use of his name. Whether the "Star Company," as he calls himself, will pretend that he has some other "C. Gray" in his establishment, I do not know. Nor do I care. The facts that I have detailed on the present and former occasions will be sufficient to show anybody that the business is no better than a swindle, and as such I again warn the public against it.—*Truth.*

DISEASED MEAT IN LONDON.

Public attention has continued to be directed to the question of the wholesale dealings in diseased meat carried on in Charterhouse Street, St. John Street, and Cowcross Street under the protection of the Holborn District Board of Works. The Board is slow to take action in the matter, protests in the past having so often died out after a little delay in replying, but there can be no doubt that this time the matter will not be allowed to rest until a remedy is found. The condition of things in these streets is wholly different from that in an ordinary sanitary district. They form a wholesale market in themselves, where meat is brought direct from the country and distributed to retailers all over London. Thus they need more skilled and continuous supervision than a small local authority can give without serious additional expenditure. The ordinary sanitary inspector is supposed to know how to tell whether a joint is properly wiped in a lead pipe, and whether a building is properly ventilated and drained, and also to keep an eye open for the sale of adulterated and decaying food. But it is too much to expect him to be able to recognise in flesh meat, skilfully dressed, the signs of the particular disease of which the animal may have died. Meat inspection is rendered both more difficult and more necessary by the absence of public abattoirs and the continuance of the old private slaughter-house. It is true that the great bulk of meat consumed in London is killed at the slaughterhouses attached to the great cattle markets at Deptford and Islington, and it is also true that all slaughter-houses must be licensed by the County Council. But the public authorities naturally cannot keep an inspector continuously at each of these scattered places, and it is when a carcase is being dressed that disease is most easily seen. Most ordinary diseases strike the special organs, and not the ordinary muscular tissue, and though the physiological changes produced in the latter render it quite unfit for food, the disease is often practically impossible to recognise at sight after the carcase has been cut into "joints" and the affected parts removed. In Berlin, not only is all slaughtering except at the public abbattoirs strictly forbidden, but every animal killed undergoes scientific examination, the blood and, if necessary, other parts being sampled and put under the microscope by trained experts immediately after death. However, although the abolition of private slaughterhouses would, no doubt, be an additional protection, the present evil largely consists in the importation of diseased meat from the country, already killed, and this, in the interests of the London consumer, ought to be detected and seized as soon as it arrives. Naturally it will tend to concentrate somewhere near the central markets, frequented by retailers from all parts of London, because distribution from that point is easiest. This is how the little "outside market" in the Holborn district has arisen, just across the street from the Corporation's own markets, but outside the City's jurisdiction. Of course, the simplest way would be to extend the jurisdiction of the meat inspectors of the central markets over the shops in "Rotten Row," either by a special arrangement, or by a statutory widening of their powers to cover all meat shops within a certain distance.

Whether the Holborn District Board have ever considered this scheme, and what decision, if any, has been taken upon it, we do not know. Strange as it may seem, the Holborn Board has actually defended the sale of meat from animals that have died from disease, on the ground that the meat was cheaper, and therefore a "benefit to the poor."—*The Citizen.*

"CRUELTY" PROSECUTION—DOCKING.

Before Mr. Kennedy, Arthur Standing and Castello Male were summoned for ill-treating four horses, and James Vincent, butcher, was summoned, as the owner, for causing the animals to be ill-treated.—Mr. Colam prosecuted, and Mr. Pook defended Standing (who was absent through illness) and Male.—Inspector Warrell, of the Society for the Prevention of Cruelty to Animals, gave evidence to show that the animals had been docked, and that the stump of the tail had been seared with a hot iron. Several days afterwards the tails were found with blood upon them, and suppurating.—Mr. Byerley, veterinary surgeon, said the operation of docking was unnecessary except in cases of disease, and condemned the practice of searing the wound with a hot iron, saying that instead he should apply an antiseptic pad.—Mr. R. Cox, veterinary surgeon, agreed with this view, and said that docking was merely a fashion, and if persons in high position would set themselves against the practice it would die out. Docking was only necessary in the case of disease, and in such instances he would not use a searing iron, but carbolic acid diluted to one in 40 or 60, or some other antiseptic. This would not cause irritation.—Mr. R. Anderson, veterinary surgeon, gave similar evidence, and said docking was totally unnecessary. He was now in practice at Paddington. Formerly he practised in Yorkshire, where he docked hundreds of yearlings, because it was the fashion. It was cruel, but not so cruel as in the case of aged horses, which he had refused to dock. Burning had not been taught for 50 years. To dock race horses would constitute a defect.—Mr. Pook, for the defence, said that if Mr. Anderson had still been in Yorkshire he would still have been docking horses. If it had not been for the burning no notice would have been taken of the docking, the pain of which was, he was informed, infinitesimal, while the value of docking to the British public was enormous. A horse with a long tail placed in a vehicle would bolt. He would guarantee that the Magistrate should go all over London and would not see a horse in a public vehicle undocked. Docking was not done out of sheer "cussedness," and was not merely fashion, but it was done as a matter of public policy. His clients had the idea that docking was necessary, and Standing sent for a man whom he considered to be skilful. Male had performed the operation several times before, and believed he did it as humanely as possible.—The Defendant Vincent said he was brought up in the country, and thought docking was necessary, and was not aware that he was breaking the law.—Mr. Kennedy said it was undoubtedly cruelty to dock horses in this antiquated and barbarous way, searing with a hot iron, and the operation clumsily done. Suppose that when a leg

was amputated in a London hospital a burning iron was applied to the wound, that would be barbarous, and horses should not be treated worse than men. Docking, as the evidence showed, was not necessary, and it was more for fashion than anything else. He fined Standing £5 and two guineas costs; Male, who was a poorer man, £3 and two guineas costs; and Vincent £5 and two guineas costs.—*Standard, Aug. 1st.*

AN INDIAN FOREST FLY.

The enclosed appeared in *The Field* of August 3rd. As you have already inserted an article of mine from the same source on the Forest fly of this country—*hippobosca equina*—I feel sure you will deem the communication of "J. B. D." of sufficient interest to be inserted in your columns.

"SIR,—The description and illustration of the Forest fly contained in your paper of May 11 correspond almost exactly with a fly which is a parasite on the pariah dogs of the district of India in which I reside. I have often seen fifty or a hundred on the neck and chest of pariahs, and from these they find their way to European dogs, but trouble these to a lesser extent, being dispersed in the daily washings.

They are pupiparous, and I have found their grub inclosed in a sac in the long hair on the neck of my collie. They have the sidling motion and short flight of the Forest fly, and the dogs find it almost impossible to get rid of one, such is the power of grasp of their hooked knife like claws. I have often amused myself by grasping the fly by the wings between finger and thumb, then allowing it to catch the hair on the back of my hand. So sharp is the claw that the hair grasped by it is cut into shavings like wood by a carpenter's plane. This is not noted in the letter of May 11, where its power of raising the skin by its hold on the hair, so I presume the fly I am describing has its knife-like claws sharper than those of the Forest fly.

A dog cannot kill one, the skin is so hard, but "mouths" it with evident disgust, saliva flowing freely. The fly always escapes out of the mouth by the upper lip, and makes its way back to the hair of the neck. The flies are never seen on any other animals than dogs.

Cachar, India, July 4. J. B. D."

The fly mentioned in the foregoing is evidently Professor Rondani's *hippobosca canina* referred to and described by that accomplished entomologist Miss Eleanor A. Ormerod, in *The Veterinary Record* of July 6th last, to which I refer your readers. MORGAN EVANS.

A Complete Success.

SIR,—Enclosed from *Star* of last Friday.—

Yours faithfully, "ADVERT."

Some months ago a correspondent described in the *Illustrated Sporting and Dramatic News* a peculiar operation which had been effected on Tippoo Tib, a useful horse in Arthur Nightingall's stable. The horse had a sort of abscess in his foot, and Professor Pritchard was called in. In order to get at the source of the evil he had to perforate the animal's foot from below, and thus gradually destroyed the disease. Much of the foot, however, went with it, and then the professor had to encourage the growth of a new one. Tippoo Tib now comes out and does his trotting exercise every day; no horse could look better.

Condition of the Blood in Malaria.

A correspondent of *The Times* writing from Haidarabad says: "Dr. Lawrie reports as the result of an inquiry, in which he was assisted by Dr. Martyn Jordan, that there is no parasite in the blood in malaria. Through a readily demonstrable staining error the nuclei of the white cells in the blood have been mistaken by the Italians and other investigators for parasites connected with the red blood corpuscle. In the all-absorbing search for micro-organisms to satisfy the new pathology the ever varying contents of the white blood cells, which would now appear destined to afford the solution of many important physiological and pathological problems, have practically been neglected or overlooked.

Prosecution by the R.S.P.C.A.—No Case.

It is not often the S.P.C.A. takes a case into court without reasonable cause: but this seems to have happened at Pontefract yesterday. A lodging-house keeper was charged with working a horse whose bridle was rubbing into a sore on its head, from which blood and matter were issuing freely. The man was able to prove, by production of the animal before the magistrates, that there had been a sore which was properly healed; and that what the officer had taken for pus was a preparation spread over the scar to keep the flies off. Case dismissed accordingly. It is to be assumed, that no veterinary saw the Pontefract horse. Why?—*Yorkshire Evening Post.*

ARMY VETERINARY DEPARTMENT.

Extract from *The London Gazette*, Aug. 6th.

Vety.-Major W. S. Adams to be Vety.-Lieut.-Col., vice C. Phillips, F.R.C.V.S., deceased.

Vety.-Lieut.-Colonel F. Duck, Principal Veterinary Officer in India, is granted the temporary rank of Veterinary Colonel whilst so employed.

CORRESPONDENCE.

ANÆSTHETICS AND CASTRATION STANDING.

SIR,

I have been much interested in the articles and correspondence, that for the past few weeks have been taking place in your columns on the above subject, and, as the matter is an important one I shall feel obliged if you will grant me a little space in which to ventilate my views. At the outset let me state that I am not a "theorist," but base my remarks on practical experience, gathered by careful observation during an extensive performance of the operation.

Your contributor signing himself C. P., writes such senseless drivel that it need hardly be taken seriously. But Messrs. Parr, Hoare, Freer, and Herbert, all make statements which if uncontested, are calculated to do much harm.

The advantages of emasculating the horse in the erect, instead of the recumbent position, are numerous. To be brief. It is more humane, is attended with less danger to the animal and is also much quicker, whether the *modus operandi* be ecraseur, ligature, or clams. Any eye-witness will bear me out when I say that the casting is quite as dangerous, and the feeling of restraint is more painful to a colt than the operation itself. And I do not for one moment suppose that any of its advocates would administer chloroform without casting. In a nutshell, the case is this. One method is of necessity prolonged, and consequently painful; the other if properly done is momentary and therefore more humane.

Mr. Freer mentions three cases of schirrous cord as having recently come under his notice, but he only tells us that one of these followed the standing operation.

Again, was schirrous cord *unknown* before the method in question became popular? and is it not *just possible* that it might have occurred had the horse been cast? Aye! and if he had been *chloroformed* also? Personally I have never met with a schirrous as a sequel to my own operations. No doubt I have been lucky, possibly I have been careful. At any rate so long as the cord is properly returned I see no reason to anticipate the much dreaded tumefaction. The standing operator has neither "broken back," "broken thigh," "injured stifles" or "shiverers" to look forward to. Many valuable horses have been killed in throwing "Queens Powder" to wit; but I have yet to hear of one done standing.

That the standing operation has its drawbacks must be admitted. To begin with, it requires a good deal of practice, accompanied by a certain amount of dexterity and skill. The infirmity of age is a decided objection, an aldermanic corporation gets in the way, and the after effects of "special scotch" are most undesirable.

Another obstacle in the path of the standing operator is the petty jealousy he excites, together with the bigoted criticism—always unfair, and often untrue—of those who from some reason best known to themselves do not adopt the method. But we shall live this down; other professions have their specialists, and why should not we? For my own part I frequently operate for other veterinary surgeons and have always been able to do so on perfectly amicable terms.

I certainly do not believe in advertising in any form whatever and have never done so. It has been said that there is some secret clam dressing. The clams used by me are plain wooden ones, fastened at one end with strong string and brought into apposition at the other by means of a leather ferrule. The inner surfaces are painted with a very little corrosive sublimate, and red oxide of mercury mixed in gum, and after removing the gland the end of the cord is dusted with a little pulv. ferri persulph.

As I write, Mr. Editor, to counterbalance the evidence of those, who on their own admissions have never tried the operation, but with "dog in the manger" like persistency deprecate it, and, as I said before have no wish for a private advertisement; I enclose my card and merely subscribe myself—

AN OPERATOR.

P.S. I forgot to mention that I invariably get £2 2s. for this class of operation. In the case of Racehorses and other valuable stock it is little enough, but perhaps seems rather heavy for common-bred animals.

SIR,

I suggest sir this is also a subject on which it would be well to hear what decision, if any, can be come to by our profession. Mr. Parr asks "Why this craze?" Well I can assure him from experience that unless at present you follow the craze in a country district your castrations will be about *nil*, and your *brother* practitioners will be doing well. It is certainly a case of going with a flowing tide and quietly waiting results. Carlyle says "Give a thing time, if it can succeed it is a right thing." We can't all have clients who never refuse what we suggest, and some of us have even to deal with farmers who want their colts doing safely, and are continually dinning into our ears how well old Tom, the gelder, used the irons.

It is truly hard enough persuading them that the old method of irons is dying out without springing chloroform on them as well, even if we were all *so very anxious* for its use. We must admit there are two sides to this question, but unless better arguments are adduced in favour of its use, I think we are justified in saying we are not converted to its general adoption in practice. I am opposed to the standing operation, but I found I must be able to operate so when requested, or lose clients to those strong-headed prize-fighters who, with sleeves tucked up, a small cap on the head, and a belt round their waist are dragged about hanging on to the testicle and every now and again butting the colt in the side after the manner of a goat. Very often the colt from shock faints or throws himself down and falling on his side the nice spectacle is seen of the testicles hanging out of the scrotum cut and bleeding, and perhaps a clam badly applied attached. The colt is *made* to rise when the same antics are gone through again, which, when eventually finished, leave the operator quite out of breath and nicely daubed with blood. I have seen what I describe above happen, when the operator, who was supposed to be expert, made no apology further than saying the colt was soft. It is said this operation is lauded because it is humane, expeditious, and without danger to the colt. Perhaps so.

C. P.

SIR,

I shall not take up much of your valuable space this week in saying all I mean to say on the above subject.

Let me repeat that Mr. Parr is most fortunately situated when time and money are no object to him, and were I in a similar position I should no doubt do likewise. But I fancy the majority of us country practitioners have a different experience and have both to consider.

It appears to me, however, that Mr. Parr begs the question entirely. He dismisses Mr. Barrett's large experience very shortly and puts against it that of Mr. Freer, who has seen three colts operated on standing and is therefore quite qualified to offer a practical opinion. Also that of your prolific contributor Mr. Hoare, who omits to give his experience of the standing operation, but takes up a lot of space in calling methods of operating which differ from his, "acrobatic performances." I should like to ask Mr. Parr how one can fairly judge of an operation if not by one's own experience, and to compare the operation on a colt with a like operation on a fully developed man is not in accordance with the elementary rules of logic.

Neither did I say that casting a horse was painful, but I do say that unless one uses an anæsthetic it causes the animal needless annoyance to cast him when he can be operated on without doing so. Mr. Parr also says that the fact that a colt will get up and eat directly after an operation is no proof that pain has not been inflicted. So far as I have followed the correspondence that has never been questioned. What I intended to imply was that the pain was of very short duration else the colt would not *continue* to eat. How does Mr. Parr guage pain while operating. He cannot possibly compare it with a similar operation on himself. The cases are not analogous.

I may inform Mr. Hoare that I know and have seen an operator and can certify he was no acrobat, if anything rather slow in his movements, who castrated an aged stallion in the stall. The animal had one attendant at his head and was not restrained in any other way. There is an old Scotch saying, "Facts are chiels that winna ding an 'daurna be disputed."

I, like Mr. Parr, object to anonymous contributions. Mine was a simple oversight, but after all the anonymity was very thinly veiled. However I shall make no mistake this time and subscribe myself, yours faithfully,

WM. HENRY DAVIDSON,

Hungerford, Berks.

COMMUNICATIONS, BOOKS AND PAPERS RECEIVED—Capt. T. Marriott, Messrs. J. K. Calderwood, C. Cunningham, A. H. Sugden, W. H. Davidson, E. W. Hoare, A. Prudames, Priestman & Crapp. *The Agricultural Journal* (Cape).